CofC

1102865-0047

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent No:	6,783,761 B2
Issued:	August 31, 2004
Patentees:	Grimes et al.
Title:	CHIMERIC PEPTIDE IMMUNOGENS
Serial No.:	09/848,834
Examiner:	P.N. Huynh
Art Unit:	1644

Certificate
OCT 0 8 2004
of Correction

CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8
I hereby certify that this paper is being deposited with the United States Postal Service as first class mail on the date indicated below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Algis Anilionis — 36,995
Attorney Name — PTO Reg. No.

Algis Anilionis — 9/29/04
Signature — Date of Signature

Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT FOR PTO MISTAKE [37 C.F.R. §1.322(a)]

1. It is noted that printing errors appear in the referenced patent which are attributable to the Office.

2. The exact page and line number(s) where the error(s) is/are shown correctly in the application file is/are:

OCT 0 8 2004

Column and Line Number of Issued Patent	Location in Application File Where the Error is Shown Correctly
Claim 1 Line 7: "circumsporozoitc," should read --circumsporozoite--.	Amendment filed March 5, 2004, page 4, former claim 23.
Claim 1 Line 12: "immunonmimic" should read --immunomimic--.	Amendment filed March 5, 2004, page 4, former claim 23.
Claim 2 Line 3: "T-lymphocytc" should read --T-lymphocyte--.	Amendment filed March 5, 2004, page 4, former claim 24.
Claim 4 Line 43: "immunomimic is peptide" should read --immunomimic peptide--.	Amendment filed March 5, 2004, page 4, former claim 26.
Claim 5 Lines 2-3: "amino terminal" should read --amino-terminal--.	Amendment filed March 5, 2004, page 4, former claim 27.
Claim 6 Lines 8-9: "SEQ ID NO; 20." should read --SEQ ID NO: 20.--	Amendment filed March 5, 2004, page 5, former claim 28.
Claim 11 Line 5: "SEQ ID NO; 14." should read - -SEQ ID NO: 14- - .	Amendment filed March 5, 2004, page 5, former claim 30.

3. Patentees request that the issuance of a Certificate of Correction be expedited in accordance with the PTO's policy for expediting issuance of Certificates of Correction, as outlined in the PTO notice, issued August 21, 2002 entitled "Expedited Issuance of Certificates of Correction when the Error is Attributable to the United States Patent and Trademark Office." In support of the requested corrections, Patentees are attaching copies of the relevant pages from the application file with this Request.

OCT 0 8 2004

4. No fee should be due in connection with this communication. However, if a fee is deemed to be due, the Commissioner is authorized to charge such fee to Deposit Account No. 23-1703.

Dated: September 29, 2004

Respectfully submitted,

Algis Anilionis

Algis Anilionis, Ph.D., Esq.
Reg. No. 36,995
Attorney for Patentee(s)

Customer No. 007470
White & Case LLP
Direct Line: (212) 819-8248

Enclosures

OCT 0 8 2004

PTO/SB/ 44 (10-96)
Approved for use. OMB 0651-0033
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO : U.S. Patent No. 6,783,761 B2

DATED : August 31, 2004

INVENTOR(S) : Grimes et al.

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Claim 1
Line 7: "circumsporozoitc," should read --circumsporozoite--.

Claim 1
Line 12:
"immunonmimic" should read --immunomimic--.

Claim 2
Line 2: "T-lymphocytc" should read --T-lymphocyte--.

Claim 4
Line 3:
"immunomimic is peptide" should read –immunomimic peptide--.

Claim 5
Lines 2-3:
"amino terminal" should read --amino-terminal--.

Claim 6
Lines 8-9: "SEQ ID NO; 20" should read --SEQ ID NO: 20--.

Claim 11
Line 5: "SEQ ID NO; 14" should read --SEQ ID NO: 14--.

MAILING ADDRESS OF SENDER: PATENT NO. 6,783,761 B2

Algis Anilionis, Ph.D.,Esq.
White & Case LLP
1155 Avenue of the Americas
New York, New York 10036

No. of additional copies

-continued

<400> SEQUENCE: 20

```
Xaa His Trp Ser Tyr Gly Leu Arg Pro Gly Ser Ser Gly Pro Ser Leu
1               5                  10                  15
Asp Glu Lys Lys Ile Ala Lys Met Glu Lys Ala Ser Ser Val Phe Asn
            20                  25                  30
Val Val Asn Ser Ser Ser Gly Pro Ser Leu His Trp Ser Tyr Gly Leu
        35                  40                  45
Arg Pro Xaa
    50
```

What is claimed is:

1. A synthetic immunogen for inducing specific antibodies against GnRH comprising:

(i) a promiscuous helper T-lymphocyte epitope selected from the group consisting of SEQ ID NO: 8 of measles virus protein F (MVP-F), SEQ ID NO: 2, SEQ ID NO: 4 of tetanus toxoid (TT), and SEQ ID NO: 3 of malaria circumsporozoitc protein (M-CSP), fused through

(ii) a spacer peptide selected from the group consisting of Gly-Pro-Ser-Leu (SEQ ID NO: 5), Ser-Ser-Gly-Pro-Ser-Leu (SEQ ID NO: 6), and Ser-Ser-Gly-Pro-Ser-Leu-Lys-Leu (SEQ ID NO: 7) to

(iii) a GnRH immunonmimic peptide comprising either the amino acid sequence of SEQ ID NO: 1, or amino acids 2–10 of SEQ ID NO: 1.

2. The synthetic immunogen of claim 1, wherein the T-lymphocytc epitope is fused through the spacer peptide to the amino-terminus or the carboxy-terminus of the GnRH-immunomimic peptide.

3. The synthetic immunogen of claim 2, further comprising a second GnRH immunomimic peptide comprising either the amino acid sequence of SEQ ID NO: 1 or amino acids 2–10 of SEQ ID NO: 1 wherein the second GnRH immunomimic peptide is fused at its carboxy-terminus or its amino-terminus through a spacer peptide to the T-lymphocyte epitope.

4. The synthetic immunogen of claim 1 wherein the T-lymphocyte epitope is fused through a spacer peptide to the amino-terminus of the GnRH-immunomimic is peptide.

5. The synthetic immunogen of claim 1 comprising a GnRH-immunomimic peptide having an acetylated amino terminal glutamic acid or an amidated carboxy-terminal glycine.

6. A synthetic immunogen for inducing specific antibodies against GnRH comprising a promiscuous helper T-lymphocyte epitope fused through a spacer peptide to a GnRH immunomimic peptide selected from the group consisting of the peptide defined by SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, or SEQ ID NO; 20.

7. The synthetic immunogen of claim 6, wherein the synthetic immunogen is the peptide defined by SEQ ID NO: 10 or SEQ ID NO: 11.

8. A combination of synthetic immunogens for inducing specific antibodies against GnRH comprising at least two different synthetic immunogens selected from the group consisting of the peptide defined by SEQ ID NO: 9, SEQ ID NO: 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO: 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO. 17, SEQ ID NO: 18, SEQ ID NO: 19, or SEQ ID NO: 20.

9. The combination of synthetic immunogens according to claim 8, comprising:

(i) the synthetic immunogen defined by SEQ ID NO: 10; and

(ii) the synthetic immunogen defined by SEQ ID NO: 11.

10. An injectable pharmaceutical composition comprising the synthetic immunogen of claim 1, and a pharmaceutically acceptable carrier.

11. The injectable pharmaceutical composition of claim 10, comprising a synthetic immunogen selected from the group consisting of the peptide defined by SEQ ID NO: 9, SEQ ID NO; 10, SEQ ID NO: 11, SEQ ID NO: 12, SEQ ID NO: 13, SEQ ID NO; 14, SEQ ID NO: 15, SEQ ID NO: 16, SEQ ID NO: 17, SEQ ID NO: 18, SEQ ID NO: 19, or SEQ ID NO: 20; and a pharmaceutically acceptable carrier.

12. The injectable pharmaceutical composition of claim 11, comprising the synthetic immunogen defined by SEQ ID NO: 10 or SEQ ID NO: 11; and a pharmaceutically acceptable carrier.

13. An injectable pharmaceutical composition comprising the combination of synthetic immunogens of claim 8, and a pharmaceutically acceptable carrier.

14. The injectable pharmaceutical composition of claim 13, comprising:

(i) the synthetic immunogen defined by SEQ ID NO: 10;

(ii) the synthetic immunogen defined by SEQ ID NO: 11; and

(iii) a pharmaceutically acceptable carrier.

* * * * *